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BODIES FOUND IN TROPICAL SPLENOMEGALY

W.B.Leishman

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NOTE ON THE NATURE OF THE PARASITIC BODIES FOUND IN TROPICAL SPLENOMEGALY.

By MAJOR W. B. LEISHMAN, M.B., R.A.M.C.,
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SINCE the publication¹ of my description of the small parasitic bodies, found in the spleen of a soldier dying from one of the anomalous types of Indian fever, a considerable number of cases have been reported in which these bodies have been found, and the questions as to their true nature and etiological relationship to tropical splenomegaly are becoming more important. The subject is rendered still more urgent by the interesting news, telegraphed by Bentley² from Assam, that he had found the parasites in cases of kala azar, as I suggested might prove to be the case, by spleno-puncture during life.

Excluding Bentley's cases, of which no particulars have yet been received, Donovan³ has found the parasites in 16 cases, Manson and Low⁴ in 2 cases, and Marchand and Leedingham⁵ report their occurrence in a German soldier, recently returned from Pekin. (In this case it is interesting to note that there is a history of a fly bite on the foot.) In addition to these I have, within the last few days, detected these parasitic bodies in films made from the spleen and liver of two soldiers who died, one at Newport and one at Netley. One of these cases came from Dum Dum and the other from Barrackpore, which is within a few miles of Dum Dum, and in each case the parasites were present in both liver and spleen. Particulars of these cases will, I hope, be published shortly.

My main object, however, is to point out the close resemblance of these parasitic bodies to some that have recently been described by Dr. J. H. Wright⁶ in an article entitled *Protozoa in a Case of Tropical Ulcer (Delhi Sore)*. In this case, which presented all the features of the Delhi sore, so well known to those who have served in the East, Wright found in the cells of the tissue—removed by curetting the ulcer—large numbers of small parasitic bodies which, from his careful description and the very excellent photomicrographs which accompany the article, leave no doubt in my mind that they are very closely analogous with the parasitic bodies now being found in tropical splenomegaly. Wright himself has no doubt as to the parasitic nature of these bodies, and proposes for them a new genus and species as *Helcosoma tropicum*.

In connexion with these parasites an interesting possibility has been suggested to me by Major Ross, who informs me that he has frequently found in the pus of Delhi sores large numbers of a flagellated organism, the *Cercomonas hominis*, and that it is just possible that these parasites of Wright's may prove to be altered *Cercomonas*.

The frequency with which these sores occur in India and their superficial nature should facilitate the confirmation of Wright's work, and, if the parasites he describes are found to be constantly associated with this disease, I think it not improbable that investigations into their life-history and the mode of their introduction into the human host may throw further light upon the corresponding problems in connexion with the parasitic bodies found in the spleen.

With regard to the nature of the spleen parasites three different opinions have been advanced. Laveran⁷ and Ross,⁸ each working with films supplied by Donovan, come to different conclusions, Ross seeing in them parasites of an altogether new genus, while Laveran, in his most recent note⁹ on the subject, adheres to his original view that they represent a new species of the genus *Piroplasma*. Finally, to my own view, that these bodies represent an involuted stage of a flagellate organism, I may now add the support of Marchand and Leedingham, who subscribe to this theory. Manson and Low,⁴ while expressing no decided opinion on their nature, strongly dissent from Laveran's views as to their intra-corporal nature. Certainly the failure in all cases to detect the parasites in the peripheral blood is a strong argument against their being intra-corporal, and it appears probable that Laveran's conception of their being *Piroplasma* may have to be abandoned.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, May 30th, 1902, p. 1252; and November 21st, 1903. ² Ibid., January 16th, 1904, p. 150. ³ Ibid., July 11th, 1903, p. 70; and November 23rd, 1903, p. 1401. ⁴ Ibid., January 23rd, 1904, p. 183. ⁵ *Lancet*, January 16th, 1904, p. 149. ⁶ *Journal of Medical Research*, vol. X,

No. 3, p. 472, December, 1903. ⁷ *Bull. Acad. de Médecine*, November 3rd, 1903. ⁸ BRITISH MEDICAL JOURNAL, November 14th, 1903, p. 1261; and November 28th, 1903, p. 1401. ⁹ *Comptes Rendus de l'Académie des Sciences*, December 7th, 1903.

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LEAKING ANEURYSMS.

THE following cases seem sufficiently interesting to be recorded:

R.A., aged 42, while at work about 4 p.m. on May 3rd in a coal mine, slipped and putting out his hand prevented himself from falling. When he regained his equilibrium he felt as though he had strained a muscle in his right arm. He continued at his work, but had to desist an hour later, owing to a large swelling having formed on the inner side of the arm at the lower boundary of the axilla. He was seen about two hours after the occurrence by Dr. Dickson, of Lochgelly, who detected slight pulsation in the swelling but the radial pulse was not appreciably affected. The arteries were noted to be atheromatous. The patient was removed by ambulance the same evening to the hospital at Dunfermline. When seen by me at 9 p.m. the swelling was the size of a Jaffa orange, was tense and tender, and pulsation in it had entirely ceased; no difference could be noted between the right and the left radial pulses. On inquiry the patient stated he had never noticed any swelling in his arm previous to the accident, but had felt pain in the region of his shoulder-joint for some eight days past and on that account had used an embrocation. The heart was hypertrophied, the apex being felt in the sixth interspace $\frac{1}{2}$ in. outside the nipple line, and a systolic murmur could be heard over the cardiac area and also posteriorly. There was no history of rheumatism or syphilis.

The following morning, as traces of extravasated blood could be detected in the forearm, I cut down upon the swelling in the upper arm, expecting to find a branch of the brachial artery ruptured. A large quantity of blood clot was turned out, but after a most careful search I could detect no bleeding point. I therefore came to the conclusion that the artery must have become occluded; the incision was accordingly closed, and a drainage tube inserted. Six hours later I was called to see the patient; the forearm, arm, and shoulder were greatly distended with extravasated blood, and the patient was in great pain. It seemed evident there must be an aneurysm, probably of the axillary artery, which was leaking, notwithstanding the absence of previous history pointing to this condition. I decided to tie the subclavian artery, and as there seemed little likelihood of the arm recovering its vitality after ligation of the artery owing to the amount of blood clot in the tissues, and as the patient's condition was grave, and he would not likely be able to stand a second operation for amputation of the arm were gangrene to set in, I deemed it wiser policy at once to amputate the arm after ligaturing the subclavian. I therefore ligatured the third part of the artery, and at once performed Spence's amputation through the shoulder-joint, Dr. Tuke very kindly assisting at the operation. On account of the serious condition of the patient the operation had to be performed as speedily as possible, and no investigation of the condition could therefore be made. The after-history of the case was uneventful, both wounds healing by primary union.

The second case was of an Arab whom I met while in Bagdad, Turkish Arabia. He had tuberculous caries of the metatarsal bones of the left foot. I thoroughly scraped the carious bones, and the patient left hospital with the wounds nearly healed. I saw him some six months later; he was then very anaemic owing to the leaking of blood from a small aneurysm of the communicating branch of the dorsalis pedis with the external plantar artery. The aneurysm was the size of a haricot bean. The condition of the foot was far from satisfactory owing to the extension of the tuberculous trouble. I therefore performed Lisfranc's amputation of the foot.

On dissection of the removed portion there was caries around the aneurysm but no spicule of bone was found to have pierced the artery; no atheroma was present. The condition had apparently arisen from tuberculous or traumatic arteritis, the latter being possibly caused at the time of the first operation.

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